

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-14 (cancelled)

15. (currently amended) A device for testing electric motors for functionality, said device including:

an antenna for receiving electromagnetic alternating fields generated by the operation of said electric motor;

an amplifier for amplification of the received signal,

an analog-digital converter for converting the received signal into a digital signal,

a unit for analysis of the received signals for signal components in the frequency range of the rotation value of electric motors or their harmonics, said unit for analysis being a device for digital signal processing and including a bandpass filter with a bandpass width corresponding at least partially to the conventional prevalent frequency range of the rotation values of electric motors or the harmonics thereof, and

an indicator unit for signaling functionality.

16. (previously presented) A device as in Claim 15, wherein said electric motor is a fan motor.

17. (currently amended) ~~A device according to Claim 15, wherein~~
A device for testing electric motors for functionality, said device including:

an antenna for receiving electromagnetic alternating fields generated by the operation of said electric motor;

an amplifier for amplification of the received signal between the antenna and the unit for analysis;

a unit for analysis of the received signals for signal components in the frequency range of the rotation value of electric motors or their harmonics, said unit including a bandpass filter with a bandpass width corresponding at least partially to the conventional prevalent frequency range of the rotation values of electric motors or the harmonics thereof and an analog/digital converter subsequent to the antenna and wherein the unit for analysis of the received signal is a device for digital signal processing; and,

an indicator unit for signaling functionality,

wherein the antenna includes one or more receiver coils.

18. (currently amended) A The device according to Claim 17, wherein the receiver coils are oriented in differing spatial directions.

19. (cancelled)

20. (cancelled)

21. (cancelled)

22. (currently amended) A The device according to Claim 15 ~~20~~, wherein the filter unit includes multiple switchable bandpass filters with bandpass widths corresponding to the frequency

ranges of the rotation values of varying electric motors or their harmonics.

23. (currently amended) ~~A device according to Claim 20,~~
wherein

the filter unit includes a filter with a bandpass width of approximately from 1 Hz to 1 kHz.

24. (currently amended) ~~A device according to Claim 20, A device according to Claim 15, wherein A device for testing electric motors for functionality, said device including:~~

an antenna for receiving electromagnetic alternating fields generated by the operation of said electric motor;

an amplifier for amplification of the received signal between the antenna and the unit for analysis;

a unit for analysis of the received signals for signal components in the frequency range of the rotation value of electric motors or their harmonics, said unit including a bandpass filter with a bandpass width corresponding at least partially to the conventional prevalent frequency range of the rotation values of electric motors or the harmonics thereof and an analog/digital converter subsequent to the antenna and wherein the unit for analysis of the received signal is a device for digital signal processing; and

an indicator unit for signaling functionality,

wherein the bandpass filter unit includes a filter with a bandpass width of approximately from 100 Hz to 1 kHz.

25. (currently amended) A device according to Claim 24 ~~20~~,
wherein

the filter unit includes a filter with a bandpass width of approximately from 100 Hz to 10 kHz.

26. (cancelled).

27. (currently amended) A The device according to Claim 15, wherein the indicator unit emits an ~~optical~~ and/or acoustic signal.

28. (currently amended) A The device according to Claim 15, wherein said device includes a portable housing.

29. (currently amended) A The device according to Claim 15, wherein said device includes an independent energy source.

30. (currently amended) A The device according to Claim 29, wherein said independent energy source is a battery or a fuel cell system.

31. (cancelled)

32. (currently amended) A The device according to Claim 15, wherein the device for digital signal processing is a microcontroller, a signal processor or an ASIC.

33. (previously presented) A process for testing an electric motor, comprising:

- placing an antenna which receives alternating electromagnetic fields in the vicinity of an electric motor which in operation generates alternating electromagnetic fields,

- analyzing via an analysis unit the received signal for signal components in the frequency range of the rotation value of the electric motor or their harmonics, and
- in the case that the analysis for functionality is positive, indicating this result via an indicator unit.

34. (currently amended) A The process as in claim 33, wherein said electric motor is a fan motor.

35. (new) A process as in claim 34, wherein said analyzing comprises

pre-determining the characteristics of the direct emission signature of a rotating functional electric motor to be tested, detecting the alternating electromagnetic fields in the vicinity of a motor to be tested, and comparing said detected signal with said predetermined signal.

36. (new) A process as in claim 34, wherein said electric motor is installed in a vehicle, wherein said vehicle has at least first and second electric motors, and wherein subsequent to analysis of said first electric motor said antenna is moved to the vicinity of said second electric motor and said process is repeated.